DEPARTMENT OF HEALTH & HUMAN SERVICES Public Health Service

Centers for Disease Control
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TB Notes
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Dear Colleague:

You are probably aware that CDC received an approved budget for the entire 1996 fiscal year. When Congress voted to return employees from furlough on January 6, they also approved the 1996 appropriations for two Department of Health and Human Services (DHHS) agencies, CDC and the National Institutes of Health. The TB elimination efforts were "level-funded" rather than cut, which is good news. However, level funding means that costs related to inflation will have to be absorbed and new initiatives will be considered only when a current one is completed or canceled.

It was with considerable regret that we in DTBE made the decision to cancel the third annual national TB controllers' workshop, scheduled to be held January 8-9 in Atlanta. The furlough of federal employees came at a critical time in the planning of the meeting and ended on the day the meeting was to begin. I believe everyone who has attended past workshops would agree that they are a valuable resource. Although we will not be meeting this winter, we have been able to reschedule the workshop for September 4-7, 1996. The workshop will be held at the Crowne Plaza Ravinia (instructions for reservations will come out soon). DTBE will be meeting with field staff on Wednesday, September 4. The workshop will begin on Thursday, September 5, and run through noon on Saturday, September 6. The National TB Controller's Association and the National TB Nurse Consultant Coalition will meet on Saturday afternoon and evening.

On a positive note, I am pleased to report that Dixie E. Snider, MD, MPH, my esteemed predecessor here in DTBE, was officially approved as the Associate Director for Science for CDC in August 1995. Dr. Snider had been providing scientific advice and assistance to CDC director Dr. Satcher in an acting capacity from August 1993 through January 1994, and then from April 1994 through August 1995. We are proud to see our former colleague and director receive this well-deserved recognition. Other good news we have is that Helene Gayle, MD, MPH, who has been serving for the past year as the acting director of our new center, the National Center for HIV, STD, and TB Prevention (NCHSTP), has been confirmed as our director. Dr. Gayle has guided and supported us through the reorganization with a friendly, team-building attitude and with concern and diplomacy regarding the changes we are experiencing. We welcome Dr. Gayle enthusiastically!

The Advisory Council for the Elimination of Tuberculosis (ACET) met on September 28-29, 1995, in Atlanta. The meeting began with the ACET chairman's report by Dr. Jeffrey Starke, the new ACET chair. The strategic plan that had been discussed at the last meeting was revisited; it was suggested that this would not be a fruitful pursuit

for ACET because of the high rate of turnover of council members and the time-consuming nature of such a plan. After discussion, the council unanimously voted to send an annual report to the Secretary of DHHS on the status of TB in the United States. A subgroup was formed to develop the report, and a draft is hoped for by the next ACET meeting. The council also unanimously agreed to a 1996 focus on TB issues related to managed care and to foreign-born persons. After a discussion about the appropriate form and content of a new ACET document regarding TB among foreign-born persons, the council agreed that between meetings the members would write both a short position paper as well as a more detailed report. Finally, the group agreed to send a letter to the Secretary of DHHS regarding a potential role for ACET in working with OSHA to review policies and regulations related to TB.

The 1995 American Public Health Association (APHA) Annual Meeting in San Diego was well attended by the TB community. There were over 200 TB-related talks and posters presented. A meeting was also held on October 31, 1995, to discuss the possible formation of an APHA-supported "TB Caucus." The meeting was attended by over 50 interested individuals, most of whom supported the concept of forming the caucus. However, I understand that APHA decided against the formation of a disease-specific caucus.

Development of the Tuberculosis Information Management System (TIMS) has entered a new phase. To enable distribution of an effective, fully-tested product, additional time has been added to the development schedule. A testing team including programmers, CSSA staff, and SEIB staff has been organized to ensure rigorous testing during each developmental stage. The good news is that the new management team leading the development will bring this to fruition as soon as possible. Ms. Tonya Martin has accepted a temporary duty assignment to join the TIMS team as the technical leader. She is currently the Chief of the Application Development Group in the Office of the Director, NCHSTP. She has worked for CDC for 6 years and is experienced in working with PowerBuilder, Sybase SQL Server, and Windows. With over 16 years of programming experience, Ms. Martin is a welcome addition to the team. Health department and TB staff will be kept abreast of all TIMS developments and project dates as information becomes available. If you have any questions about TIMS, contact Ms. Kate Hedstrom at (404) 639-8122.

Our *TB Notes* editor would like to extend an apology to all of our readers for the recent issues that were late or missing. She promises to get back on track this year. I also want to point out the issue designation, Vol. 1, 1996. We believe that this is simpler and more practical than a seasonal designation. There will still be four issues per year. Thank you for your patience during this learning curve.

Kenneth G. Castro, MD

In This Issue

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Volume 1, 1996

HIGHLIGHTS FROM STATE AND LOCAL PROGRAMS

TB Risk Assessment Profile of Hospitals - Minnesota, 1995

The Minnesota Department of Health (MDH) TB Control Program conducted a state-wide TB risk assessment survey to encourage hospitals to perform risk assessments and to provide health care professionals with referral information for TB patients. In October 1994 CDC published *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health Care Facilities, 1994.* In response, in January 1995 the MDH TB control program sent each hospital in Minnesota a copy of the guidelines, as well as a TB surveillance report on the incidence and prevalence of TB disease and drug susceptibility patterns of *M. tuberculosis* isolates, by county, during 1994. The surveillance report was compiled by MDH to facilitate the initial risk assessment; it will be distributed annually by MDH to all hospitals in Minnesota.

In March 1995, the MDH TB control program surveyed all Minnesota hospitals to obtain TB risk classification data on these sites. The information, gathered for surveillance purposes, will also inform health care providers of possible referral sites in their areas. In July 1995, each participating facility received a summary of the survey results and a facility-specific list containing the TB risk category and TB admission/referral practices of sites that agreed to share their data.

All facilities responded to the survey. The facilities included 147 hospitals from 83 counties in the state. Of the 147 hospitals surveyed, 145 (99%) agreed to let MDH share their data with other facilities. Three (2%) facilities did not perform a risk assessment. The hospitals that reported TB risk classifications included 45 (31%) minimal risk facilities and 46 (31%) very low-risk facilities, none of which routinely admit TB cases or suspects to inpatient areas. In addition, 48 (33%) facilities reported a low-risk classification, of which 47 (98%) routinely admit TB cases or suspects as inpatients and 40 (83%) routinely accept TB patients as inpatient referrals. Among the low-risk facilities, one (2%) hospital admits TB patients only in qualified circumstances, and three (6%) hospitals accept TB inpatient referrals only in specific circumstances.

Four (3%) hospitals identified themselves as intermediate risk, and one (1%) hospital reported a high-risk classification. All of the intermediate-risk and high-risk facilities routinely admit and accept referrals of TB cases or suspects. Three (60%) of the five intermediate-risk and high-risk facilities are located in the seven-county Twin Cities (Minneapolis-St. Paul) metropolitan area.

The survey results indicate that hospitals admitting TB cases or suspects as inpatients are geographically dispersed throughout the state, although such facilities (particularly those with higher TB risk classifications) are concentrated in the seven-county metropolitan area. This pattern reflects the incidence of TB in Minnesota. In 1994, there were 140 TB cases reported in 23 counties in Minnesota. Of these 140 cases, 109 (78%) occurred in residents of the Twin Cities metropolitan area, including 82 (59%) cases in Hennepin County (which includes Minneapolis) and 23 (16%) in Ramsey County (which includes St. Paul). Health care providers throughout the state can enhance the rapid diagnosis, treatment, and control of TB by becoming familiar with CDC's current guidelines and by becoming aware of the TB risk classification, admission, and referral practices of hospitals in their surrounding area.

—Reported by Kristine MacDonald, MD, MPH, and Wendy Mills, MPH
Division of Disease Prevention and Control
Minnesota DOH

TB in Ohio Correctional Facilities

To improve TB control activities within correctional settings, the Ohio TB program is encouraging local health department TB staff to help write and implement TB control plans for jails and prisons. In early 1995 the Ohio Department of Health conducted a survey of TB in correctional facilities in cooperation with the local health departments. Of the 88 counties to whom surveys were sent, 41 responded; only 17 reported ongoing TB control activities within the local correctional settings. Tuberculin screening in local prisons and jails was conducted for only 25.7% of inmates and only 19.4% of employees. In the state correctional facilities, inmates are screened 100% of the time, but employees are not routinely screened unless there is evidence of a problem. A major concern identified by the study was postrelease follow-up for inmates who were started on preventive or treatment regimens. Data were not available regarding completion of therapy; the reason given was that inmates become lost to follow-up after release.

To address the problems described above, the state TB program is encouraging local health department TB control staff to help write and implement TB control plans for jails and prisons. TB control plans should, at a minimum, include surveillance activities for inmates and staff, policies and procedures for early identification and management (isolation and containment) of TB disease, TB

education for inmates and staff, and discharge planning policies and procedures coordinated with the local TB control staff to provide continuity of postrelease TB follow-up. In order to assist local TB control staff in this endeavor, Ohio TB control staff developed and distributed a generic TB control plan for local jails and prisons. In addition, they are facilitating meetings of local corrections and TB control staff to review the generic plan and tailor it to individual facilities.

—Reported by Shirley Dobbins, RN, BA, CIC
Ohio TB Control Program

Missouri Associations Team Up to Control Tuberculosis

The Missouri Bureau of TB Control's exceptional working relationship with the Missouri Advisory Committee for the Elimination of Tuberculosis has resulted in numerous successful collaborations, particularly in conducting annual assessments of local health departments. The Missouri Bureau of TB Control and the American Lung Associations of Eastern and Western Missouri have a long history of working together to eliminate TB in the state. In October 1987, the Missouri Joint Conference Committee, consisting of board members from both American Lung Association groups, passed a resolution authorizing the formation of an ad hoc subcommittee, and charged this subcommittee with surveying the status of TB in Missouri. The subcommittee subsequently was charged with developing and recommending a strategic plan for TB elimination. This group, which continues to function as a subcommittee of the Missouri Joint Conference Committee of the Lung Associations of Eastern and Western Missouri, is known as the Missouri Advisory Committee for the Elimination of Tuberculosis (MACET).

In August 1989, MACET completed and approved the implementation of a *Strategic Plan for the Elimination of Tuberculosis* for Missouri. The plan, tailored after the CDC national plan, focuses on improvements in four areas: surveillance, case prevention, disease containment, and program assessment and evaluation. In order to implement the plan, MACET worked closely with the Bureau of TB Control.

Over the past 8 years, MACET has grown in number of members and in stature, and is a moving force in the effort to eliminate TB in Missouri by educating and using advocacy, as well as by formatting and recommending policies and procedures to ensure effective TB prevention and control. Membership over the years has evolved to include not only program directors of the American Lung Associations, but also TB controllers and program managers for the metropolitan areas, laboratory managers and hospital administrators, and medical staff from hospitals, private practice, and local health departments. Also included are directors of drug treatment centers, minority health groups, and representatives of state and local governmental agencies.

MACET meets quarterly in centrally located Columbia, Missouri. Meetings are chaired by a medical expert, Dr. William Banton. Each year, the two lung associations alternate in arranging the meetings and providing financial and staff support for the committee. Agendas for the meeting are prepared by the lung associations with input from the MACET leadership, the Bureau of TB Control, and the committee members. Activities can range from a simple discussion of the status of TB in a specific area of the state to mobilizing the membership to take action; from ensuring the viability of the state TB laboratory to advocating before state legislators for additional funding that would allow local health departments to provide free TB medication.

Over the years, the exceptional working relationship that exists between the Bureau of TB Control and the MACET committee has enabled the two groups to effectively and cohesively implement activities aimed at achieving mutually stated goals. Their joint goals are to reduce the number of new TB cases per year to 175 by the year 2000, and to ultimately eliminate TB (1 case per million population) in Missouri by the year 2010. MACET and the Bureau have made completion of treatment their No. 1 priority and have established directly observed therapy (DOT) as the standard of care for all TB patients in Missouri.

MACET, with the assistance of the Bureau of TB Control, was instrumental in successfully advocating for initial four-drug regimens, Mantoux PPD skin tests over multipuncture tests, TB Awareness Week, and educational conferences for physicians and health care providers.

Each year, a report is prepared with input and assistance from the Bureau of TB Control. This report outlines progress made towards implementing the strategic plan and attaining the stated goals and objectives. The report points to areas of success and deficiencies and provides a written blueprint for future action. The annual report is disseminated widely throughout the state to local health departments, governmental agencies, health officials, and political leaders.

While there have been many accomplishments, one key success of the committee has been its close and effective working relationship with the Bureau of TB Control in conducting annual assessments of local health departments. These written assessments provide local health departments with recommendations aimed at improving area TB control activities. With the high recognition and influence that the committee exerts, most, if not all, of the recommendations are implemented during the following year. This process has resulted in significant program improvements, which include

- Increasing staff levels in local health departments. St. Louis city and county were able to increase their hiring of outreach

workers and clerical staff to support their TB control activities based on the recommendation of MACET program assessments. Kansas City was able to obtain much-needed nursing and clerical staff to support its clinical operation.

- Improved medical consultation. MACET physicians act as consultants on behalf of the Bureau and provide technical assistance by reading and reviewing chest x-rays for the Department of Corrections, answering medical questions for physicians, and reviewing the patient's medical treatment with physicians.

- Improved TB registries. Local health department registries are reviewed to ensure that appropriate data are collected and properly documented. This has resulted in the computerization of TB records in Kansas City, Springfield, and St. Louis city and county. In addition, programs were able to assign a designated individual to maintain records.

- Improved compliance. MACET and the Bureau have made completion of treatment their highest priority. This is being stressed repeatedly in program assessments, in-service training, and medical chart reviews of TB patients. DOT has been established as a standard of care for all TB patients in Missouri and is supported through the use of incentives. Progress in achieving increased enrollment in DOT is continuously monitored. Since 1992, much improvement has been made. In 1992, only 20% of the 245 TB patients were placed on DOT, compared to 56% in 1995. As a result of these activities, completion of therapy increased from 83% in 1992 to 93% in 1994.

—Reported by Dan Ruggiero
Missouri TB Control Program

Massive Work Site Contact Investigation - Wisconsin, 1995

As a result of a large-scale work site contact investigation, the Wisconsin TB program has identified, and will focus future surveillance efforts on, a concentrated high-risk area with a large immigrant population. On July 7, 1995, the Walworth County Health Department notified the TB Control Program, Wisconsin Division of Health (DOH), about a 22-year-old Hispanic female with a suspected case of active TB. The patient had been under medical treatment for bronchitis since January 1995, and in June had been thought to have symptoms related to allergy. During July she had signs and symptoms of illness which included fever, hemoptysis, shortness of breath, and loss of appetite. On July 3 the patient had a chest x-ray which

revealed upper-lobe cavitary lesions, a 22-mm PPD skin test reaction, and bloody sputum, with a smear having greater than 9 acid-fast bacilli (AFB) per oil immersion field. The patient was started on four-drug antituberculosis therapy on July 8. The patient's isolates of *Mycobacterium tuberculosis* were sensitive to all first-line antituberculosis drugs.

On July 7, 1995, skin testing was done on 22 household contacts of the index patient; 20 (91%) had a reaction of greater than 5 mm (mean 20.9 mm; median, 18 mm; range, 9-65 mm). Family household members had entered the United States from Mexico between May 1994 and July 1995. The two PPD-negative individuals were scheduled for repeat skin tests on December 27, 1995 (90 days after the index patient's sputum converted to negative). Of the two individuals, one (an 8-year-old child) received prophylactic treatment, but subsequently converted. The second PPD-negative individual returned to his country of origin. Twenty of the 21 household contacts remaining in Wisconsin were placed on DOPT, with one contact postponing therapy due to pregnancy.

The case patient had been employed at a bicycle assembly plant from August through December 1994, and then from March 1995 until she was hospitalized in July 1995. Between January and March 1995, the index patient had been employed at a factory that manufactures plastic car parts. The bicycle assembly plant is housed in a 107-foot-square room with 25½-foot-high ceilings. This non-airconditioned metal building is cooled with oscillating fans positioned just above head level, which raised concern about airborne transmission of respiratory droplets from the index patient. There were 730 individuals identified as current employees at the bicycle assembly plant and 800 persons identified as having been employed during the two time periods when the index patient was working there and considered infectious. Approximately 30% of the employees are foreign-born persons. Because of the active nature of the index patient's illness and the high rate of the tuberculin skin test (TST) positivity among her household contacts, the index patient's co-workers were recommended for skin testing. Initial skin testing of 711 currently employed workers occurred on July 31 and a second round of testing was conducted on 406 workers on October 3, 1995. A plan to implement screening of the 800 previously employed workers was also implemented. During the initial screening, 13 employees who were identified as having PPD-positive reactions in the past were not tested and 6 were absent during the test dates. Of the 711 employees who participated in the initial screening, 150 were classified as having positive reactions with indurations larger than 5 mm. During the 90-day postexposure rescreening, an additional 35 employees reacted with indurations greater than 5 mm.

TST activities were conducted at the workplace using the state TB program staff and nursing staff from two local health departments in the two counties where the majority of the workers resided. Because of the large number of employees requiring chest x-rays and liver function tests, arrangements were made for a mobile van and for physician and nursing staff on site; to date, the bicycle assembly company has spent approximately $70,000 for these medical assessments. The Wisconsin DOH provided $150,000 to the local health department (1) to contract with a local hospital for the services of four nurses to administer the biweekly DOPT at the plant, and (2) to contract for two on-site interpreters to help nurses ascertain patient compliance and assessment of potential adverse drug reactions. The index patient and family members who do not work at the bicycle assembly plant are receiving DOT and DOPT, respectively, through a local clinic. The Wisconsin DOH routinely provides all antituberculosis medication for residents.

Several difficulties were encountered in implementing routine contact investigations at the bicycle assembly plant. High turnover rates, high numbers of out-of-country or out-of-state residents, and the immigrants' regular travel to their country of origin presented challenges for the evaluation and follow-up of individuals. At least 40% of the workers at this site are legal immigrants from Mexico who regularly return there to visit relatives, thus the time and place of exposure of infected individuals cannot be assessed. The annual turnover rate at the bicycle assembly plant is about 200%: an average of five workers per week leave the plant. Coordination with local health departments was initiated to ensure adequate monitoring of individuals placed on preventive treatment. Case management and DOPT responsibilities for these individuals are transferred to the local health department in the county or state of residence for those employees who leave the plant; all others are monitored on site. Employees who reside in Illinois receive DOPT at the plant site; when they terminate employment, the DOPT and case management responsibilities are transferred to the Illinois Health Department.

Among individuals working at the plastics assembly factory at the time the case patient was employed there, 55 were identified as close contacts and screened on August 28, 1995; of these, 20 (36%) had positive reactions. To assess the baseline skin test reactivity rates at this worksite and the likelihood that TB was transmitted at this plant, 150 employees who did not have contact with the index case were screened on September 29, 1995; of those, 23 (15%) had positive reactions. The 43 employees with positive reactions are being physician evaluated, and are receiving DOPT at the work site under the supervision of a local health department nurse.

This investigation is ongoing. DOPT clients will not complete their therapy

until spring 1996. Screening and potential treatment of the 800 previous employees of the bicycle assembly plant probably will not be completed until summer 1996. As a result of this contact investigation, the Wisconsin TB program has identified a two-county area as a concentrated high-risk area with a large Mexican immigrant population. Individuals continue to immigrate to this area as a primary relocation site. Thus, future enhanced Wisconsin TB surveillance will be focused on this population to identify infected individuals and provide preventive therapy.

—Reported by Dawn Tuckey, Tanya Beyer, and Mary Proctor
Wisconsin TB Control Program

Memories of a Former TB Patient

The following narrative is based upon a live interview conducted by the Missouri Department of Health, Bureau of TB Control, with Nina Ohrenberg of Columbia, Missouri, who was admitted to the TB sanatorium in Mount Vernon, Missouri, in March 1946 and discharged on December 15, 1948. The year was 1946; Nina, a young teenaged girl in her freshman year of high school, was called into the nurse's office. It was the time of year when the public health nurse came to the school to conduct TB screening. The nurse administered the patch test, which resembled a BandAid, and asked students to return in a few days for the reading. The young girl's test result turned out to be positive and the 13-year-old was referred for a chest x-ray.

A few days later, the public health nurse notified the family that Nina had active TB and must stay at home in bed until room was available for her at the state sanatorium. Missouri law required that TB patients be hospitalized at the state sanatorium in Mount Vernon, located in an isolated rural area in southwest Missouri. She was the youngest child in a family of 11; no one else in the family had TB. Upon hearing her diagnosis, Nina was primarily concerned with what would happen to her. She wondered how she would continue her high school education and see her family and friends, and what would happen to her medically. If TB was not a death sentence, she felt it was sure to be a prison sentence.

It was March before a bed was available for Nina at the state sanatorium. Frightened, but supported by her parents, the 13-year-old traveled to Mount Vernon where she was housed in one of the few buildings designated for women. There were few children at the sanatorium and she was the youngest. She received little or no orientation to the facility, other than a strict set of rules calling for a lot of bed rest and fresh air.

Nina soon learned the daily routine at the facility from other patients, who felt protective towards her and served as surrogate mothers for her. The day began at 7:00 a.m., when patients were allowed out of bed. Breakfast was served and the patients were allowed to move around; no strenuous activity of any sort was allowed. At 9:00 a.m., they

went back to bed until 11:00 a.m.; they were then allowed out of bed for lunch until 1:00 p.m. From 1:00 p.m. to 4:00 p.m., the patients were back in bed for rest. At 5:00 p.m., dinner was served and some social activities were allowed until 9:00 p.m., when it was bedtime.

There was no patient "bill of rights" at the sanatorium. Patients were ordered to the facility by the state and expected to follow the rules. These rules were strictly enforced by a head nurse. Patients were expected to cover their mouths and noses when coughing, sneezing, or clearing their throats. Patients were housed on an enclosed verandah, tucked into beds, and told to stay there. They were expected to rest when told and to keep the windows open during rest times, even during the frigid winter temperatures. When patients were dissatisfied with a particular aspect of sanatorium life and attempted to ask the administration staff for such things as window curtains in their rooms, they were severely reprimanded by the supervising nurse. Patients were not allowed to work or do any type of activity. Those patients who were cured and remained at the sanatorium to work were not allowed near food.

Treatment of TB consisted of plenty of bed rest, fresh air, and well-balanced, nutritious meals. If this treatment failed to cure the disease within a few months, doctors would partially collapse the patients' lungs with pneumothorax treatments. Nina did not respond to bed rest and fresh air, but she was not able to have pneumothorax treatments. Therefore, paralysis of the phrenic nerve and peritoneal air injections were performed. When this also failed to cure the disease, she underwent surgery (thoracoplasty) whereby her ribs were removed in order to permanently collapse the lung and allow it to heal.

Nina was concerned that this surgery would leave her permanently deformed. She had seen other women who had undergone a similar procedure and who subsequently had severe spinal deformities. Nina was determined that this would not happen to her. She followed the doctors' orders and stayed in bed for 4 months after the surgery with a sand pillow under her side to ensure that her lungs would heal properly and that she would be able to resume a straight posture afterward.

While life at the sanatorium was hard for Nina and her family, they did get to see each other regularly. During Nina's first few weeks at the sanatorium, her father, who was working nearby, was able to visit her weekly. After his work took him to other parts of the state, his visits were less frequent. Nina's family would come see her every 2 to 3 months. Her mother had to request special permission from the sanatorium in order for Nina to spend part of the weekend with her in town. Patients were allowed a leave of absence for 1 or 2 weeks a year if their condition permitted it. On one occasion, Nina was allowed to return home to celebrate her sister's graduation.

After 2½ years at the sanatorium, Nina was discharged and allowed to return to her home and family. For a while, however, life back home was not the same. While most of her neighbors and friends were happy to see her, it was several years before they would stop referring to her as "the one with TB." Once home, Nina resumed school and completed her high school education. She wanted to be a nurse, but the vocational rehabilitation counselor told her that the medical advisor would not approve it. After graduating from high school, she attended the University of Missouri at Columbia. During this time, the student health physician encouraged her to pursue a nursing career.

Five years after Nina left the sanatorium, and while Nina was pursuing her Bachelor of Science degree, medications became available for the first time for the treatment of TB. While taking INH, Nina began to experience a numbness in her fingers and arms and severe headaches. The school doctor immediately diagnosed this as a deficiency of vitamin B-6 due to the INH and prescribed the vitamin to be taken.

Today this once-frightened teenaged girl with TB is a retired nurse, living a healthy life. In spite of her serious illness and all the restrictions of living at the sanatorium, there are moments from this time long ago that she remembers fondly. For instance, each Wednesday night the patients were allowed to go to the administration building to see a movie, and on Sundays they were allowed to go to church. She also remembers a homecoming party held in 1948, the first one since the war ended. A homecoming queen was elected and the patients were allowed to have a party. Another pleasant memory was the annual Halloween celebration, when patients dressed in costumes and attended a party in the administration building. She recalls that the sanatorium operated a greenhouse, and patients received bouquets on their birthdays. A few romances and marriages resulted from patients meeting at the sanatorium. However, such activities were against the established rules and were strictly discouraged by staff. For Nina, there was little opportunity for romance. Most of the patients and staff were older than she, leaving very few young men with whom to socialize.

When asked what she would say to other TB patients today, Nina simply replied, "They are lucky to have it *now*" because TB medications are available and the disease is curable.

—Reported by Dan Ruggiero
Missouri TB Control Program

Indiana Reports Success with a Very Difficult Patient

After decades of on-again, off-again treatment and general nonadherence to medical recommendations, in 1995 Mr. X's case was finally brought to a close. His case of multidrug-resistant (MDR) TB both challenged and frustrated public health workers in their efforts to

contain and control this dangerous communicable disease. Many individuals and agencies became involved before the case ended. Diagnosed and placed on self-administered therapy by a private physician in 1967, this patient took his medications with varied consistency; he decided how often he needed his TB medications and which ones his body might need on any given day. Unfortunately very little follow-up was provided for this patient during the 1960s and 1970s, and consequently there are few data available on his case for that period.

In 1985 Mr. X was hospitalized with smear- and culture-positive TB that was susceptible to drugs. In 1986, however, he started showing resistance to INH and RIF. In 1987 Mr. X became sick enough to return to the hospital for care; by that time, traditional TB drugs were ineffective and he was diagnosed with TB resistant to INH, RIF, and ETH. By 1992, he was resistant to at least five drugs—INH, RIF, ETH, EMB, and PZA—and was not improving on a regimen of second-line TB medications that included CS, CAP, and SM.

Directly observed therapy (DOT) was recommended in the late 1980s; however, it was not successful because access to the patient's building was difficult. Even though the patient had a good rapport with the outreach worker, the patient would not meet the outreach worker if he did not feel like taking his medicines. Additionally, the patient failed to see the need for behavior modification, especially concerning alcohol consumption. Health officials knew that behaviors such as erratically and inconsistently taking pills, routinely eluding the outreach worker, and daily beer drinking could only lead to bigger problems.

In 1993 the state of Indiana paid for Mr. X's transportation to and treatment at National Jewish Center for Immunology and Respiratory Medicine. That hospitalization involved the removal of one lung and the initiation of an effective drug regimen. Preliminary arrangements were made to transport the patient back to Indiana and admit him to a hospital where his treatment would be monitored. However, before the arrangements were complete, a family member provided the patient with a bus ticket home and the patient left the Denver hospital against medical advice. The patient was lost to follow-up; however, health officials believed he would reappear in the community. After a month or two, Mr. X was seen walking the streets, and health officials took immediate action to ascertain his smear status and treatment compliance.

It was obvious that curing this patient of his TB disease would require more than just local health department interventions and attempts at persuasion. The local health officials had no previous experience in managing this type of situation, but decided that more aggressive options were necessary since other efforts had failed. It was at this point that the Indiana State Department of Health

(ISDH) became even more intimately involved in case management to bring about some resolution.

The patient was instructed to be examined by his physician. When the patient refused to follow his recommendations, the physician in turn refused to accept him as a patient any longer. With the help of the TB Program and Office of Legal Affairs of the ISDH, the county attorney and local officials worked diligently to obtain a court order for his detention in a local hospital where DOT could be administered and sputum could be collected and examined. After he was found to be noninfectious based on negative smears, he was transferred to a local nursing home where he could continue to receive DOT and be monitored for side effects. Unfortunately, this arrangement did not work out and Mr. X was once again roaming the streets of his hometown and drinking with his friends.

Meanwhile, local and state health officials were searching for a workable solution. Additional agencies became involved, such as the Mental Health Division of the Family and Social Services Administration (FSSA) and Medicaid. Since Medicaid had paid for his stay in the local hospital and nursing home, it would no longer cover any charges that were housing related. It would only cover the areas deemed medically necessary such as physician visits and medications.

After a psychiatric examination was completed, Mr. X was court-ordered to the state mental hospital until he completed his treatment for TB and mental illness. The diagnosed mental illness of alcoholism was the primary reason the patient qualified for admission to a state mental hospital; he could not have been admitted solely on the basis of his TB diagnosis, nor could he have been admitted if he had been smear positive. As part of the TB treatment plan, the patient's medications were administered using DOT, and monthly sputum specimens were collected to ensure that he was not infectious.

After 18 months, Mr. X returned to his hometown, sober and TB-free. By the end of the ordeal, many lessons had been learned. First, it is preferable to prevent drug resistance than to deal with all the complications that arise from a single case. With his history of nonadherence, Mr. X possibly could have infected others with his MDR TB at any time. The Indiana TB Program had to go to great lengths to prevent this.

Second, when a TB program is faced with such a complicated case, collaboration and cooperation are the critical success factors. The Mental Health Division of FSSA provided what other agencies could not. Its role was essential in curing Mr. X's TB as well as his chronic alcoholism. Since DOT was only one portion of his overall treatment plan, the patient reaped the benefits of a multifaceted health approach. There

can never be too many partners when it comes to solving a public health crisis.

Third, education never stops. As individuals and agencies became involved in the process, all had to be educated about TB; everyone had to learn why this patient posed such a public health risk and why treatment until cure was so critical. Many partners learned about TB and how to deal with patients who have TB. Education also served to alleviate the unfounded fears that some had about TB. Constant education also raised TB awareness and served as a reminder that this disease is still among us and our control efforts must continue.

—Reported by Wendy Heirendt
Indiana TB Control Program

Texas Develops a Pilot System for Tracking Migrant and Binational Cases: The Binational and Migrant TB Referral and Tracking Project

Amid the grim statistics for TB along the U.S./Mexico border and among migrant farm workers, the Binational and Migrant Tuberculosis Referral and Tracking Project (TB-Net) has developed a pilot tracking system with a computerized registry, located in El Paso, Texas, and a portable record, enabling health care workers to maintain continuity of care for TB cases and suspects originating in Texas or expected to return to Texas. Various studies have consistently shown that 30%-55% of migrant farm workers who are screened for TB have positive results on their TB skin tests. A CDC study also determined that these workers are six times more likely than other members of the U.S. workforce to have TB. Additionally, potential future farm workers, namely the children of current farm workers, are at greater risk for meningitis than the general population of children.

A cornerstone of the *TB-Net* pilot project is the computerized registry, which serves as a way to store and transfer data. Migrant workers enrolled in the system become part of this confidential registry, which tracks the individual's TB health history: laboratory results, treatment regimens, and diagnostic status. Authorized health care providers can then retrieve and subsequently update a patient's complete history through this registry, which is accessible by a toll-free number available in both Mexico and the United States: (800) 825-8205.

Upon orientation and enrollment in the *TB-Net*, a TB patient is given a portable written record in English and Spanish, similar to an international health certificate carried by travelers. Thus, individuals receiving treatment carry complete and updated vital information at all times about their diagnostic status. For this computerized and written system of data storage and transferral to work effectively, the patient must present the portable record and the provider must accept and complete it at each clinic visit. Additionally, health care providers are responsible for telephoning or faxing the toll-free number, or mailing updated patient

information to the computerized registry. *TB-Net* is also available to health providers for consultation regarding U.S. and Mexican TB protocols.

Initial Visit

When a patient is first enrolled in the project, the provider fills out the following patient information on the portable record:

- Name, sex, and date of birth
- Record number: This is based on the system used in Mexico to create unique identifiers. The formula for the identifier is as follows: First two letters of the patient's last name, first letter of patient's mother's maiden name, first letter of patient's first name, date of birth by year/month/day. For example, patient name: Rosa Gonzales; mother's maiden name: Chavez; date of birth: April 17, 1956. Unique identifier = GOCR560417
- Patient weight: This is to be determined at a later date if the patient has lost or gained a significant amount of weight.
- History of TB, history of BCG, PPD results, history of preventive therapy, and number of months of preventive therapy.
- Disease site
- Treatment start date
- Drug susceptibility results
- On the pull-out Drug-o-gram the enrolling clinicians indicate the patient's initial drug regimen as well as the culture and/or smear results.
- If the patient receives an x-ray, a brief description of the x-ray is necessary.
- Finally, each clinician writes down the clinic name and phone number.

Follow-up Visits

- Every time the patient comes to a clinic, the provider indicates on the Drug-o-Gram the medication the patient has received.
- If there are additional x-rays, the record needs to be updated.
- Each clinic must provide its clinic name and phone number for future reference.

For further information on the *TB-Net*, contact Ms. Del Garcia at the Migrant Clinicians Network, P.O. Box 164285, Austin, Texas 78716 [telephone number (512) 327-2017, fax number (512) 327-0719]; or Dr. Gerardo de Cosio, El Paso City/County Health and Environmental District, 222 S. Campbell, El Paso, Texas 79901 [telephone number (915) 543-3578, fax number (915) 543-3566]; or the *TB-Net* toll-free number listed above.

—Reported by Phyllis Cruise and Sam Householder, Jr.
TB Elimination Division
Texas DOH

Puerto Rico: Health Care Reform

In 1993, the Puerto Rico Department of Health initiated a plan to provide health care insurance to the medically indigent patients on the island. Lessons learned: the Department of Health must allow

potentially affected programs to participate in the negotiation process and must also develop a mechanism to allow the programs to effectively regulate the delivery of services. The main purpose of this government initiative was to ensure that all medically indigent residents of Puerto Rico have a health plan as accessible and reliable as the ones provided by private health insurance companies. To achieve this innovative and ambitious goal, the health department had to disengage from its traditional role of health care provider and embrace its new role as a health care facilitator, allowing the private health insurance and health maintenance organizations to bid for the delivery of services and management of public health facilities. This means that the health department will eventually contract, and therefore relinquish, all of its health care facilities, personnel, and services to the lowest bidder. It is the health department's opinion that by doing so it will empower the medically indigent to have freedom of selection and better access to health care services. The Department of Health envisions health care reform being fully implemented throughout the island no later than 1998.

Thus far, the health care reform plan has been implemented in three health regions, Fajardo, Guayama, and Arecibo, all with dissimilar outcomes in regard to the TB services currently being provided by the health maintenance corporations in those areas. The first TB clinic impacted by health care reform was Fajardo, a city located approximately 40 miles east of San Juan. This health region has a population of approximately 133,000 residents. On an average, Fajardo reports six TB cases per year. Owing in part to the small number of TB patients cared for in this specific clinic, no significant difference in services has been observed. However, it is expected that there will be some modifications in the use of the existing personnel assigned to the clinic and the purchase and distribution of anti-TB medications.

The second TB clinic impacted by the health care reform plan was Guayama, which is located approximately 65 miles south of San Juan. Guayama provides health care services to approximately 90,000 residents. On average, Guayama reports five TB cases per year. Unlike the Fajardo clinic, Guayama has undergone two major changes as a direct result of the health care reform:

- The TB clinic personnel were ordered to move to an area of the hospital that does not meet the minimum conditions for providing patients and employees with a private and safe environment.
- Since the relocation to the new facilities, the TB clinic has lacked a physician to evaluate the health region's TB patients.

The TB control program will continue to provide technical assistance until the health region is able to correct these irregularities.

The third area impacted by the health care reform was Arecibo, a city approximately 50 miles west of San

Juan. The Arecibo health region provides health care services to approximately 350,000 residents. On average, the Arecibo health region reports 20 new TB cases a year. Unlike Fajardo and Guayama, the Arecibo health region informed the TB control program of the negotiations and developments between the Department of Health and the health maintenance corporations. This effective communication allowed the TB control program to adequately formulate recommendations during this period for the appropriate use of the TB personnel and physical facilities, and to convey the TB program's importance in the health region; consequently the delivery of TB services improved in this critical health region.

We believe the Puerto Rico health care reform plan will greatly improve the quality of health services available to the medically indigent patients on the island. It will give them the freedom to choose from an extensive list of participating physicians, health centers, and hospitals.

However, it is imperative for the Department of Health to permit potentially affected programs to participate in the negotiation process. This will ensure that all essential services needed to successfully manage a program are contemplated in the final agreement.

Finally, the Department of Health, in cooperation with the health care organizations, needs to develop a mechanism to allow the programs to effectively regulate the delivery of services in order to avoid any conceivable agency irregularities. This will ensure adequate TB control services in their respective clinics.

—Reported by Edwin Rodríguez
Puerto Rico TB Control Program

Texas: Expansion of Binational Projects

Cooperative agreement funds are being used to support binational border projects which facilitate the collaboration of health professionals on both sides of the Texas-Mexico border in preventing and controlling TB. On November 8, 1995, a binational ceremony was held at the Camino Real Hotel in El Paso, Texas, where U.S. and Mexican health officials signed a formal agreement to collaborate in the struggle against TB on both sides of the border. The agreement was signed by several regional and local health officials from the United States and Mexico, notably Dr. David R. Smith, Texas Commissioner of Health, and Dr. Eduardo Rico Escobar, Director General of Public Health Services for the state of Chihuahua, Mexico.

In this agreement, the current El Paso/Ciudad Juarez Binational Project, an agreement between two border “sister cities,” is expanded to the entire state of Chihuahua in Mexico. It creates a formal memorandum of understanding between two states, Texas and Chihuahua, recognizing the serious problems associated with the control and elimination of TB in persons who frequently cross the border. The accord recognizes the need for improved

collaboration and coordination between health authorities on both sides of the border to find and test those exposed to TB and to ensure that others being treated for the disease actually complete their treatment. The agreement also includes provisions for training health care workers, improving data collection and analysis, and sharing laboratory services.

During the last 20 years the border region has experienced phenomenal and uncontrolled population growth, which has severely strained local resources for meeting public health needs in the area. More than 8 million people live in the border region; in addition, there are over 40 million legal border crossings each year between Mexico and the United States. The El Paso/Ciudad Juarez area is the second largest port of entry in North America. The growth of the "maquilla" industry (small industrial plants) along the Texas-Mexico border has stimulated large numbers of previously unemployed persons to migrate to the region in search of jobs. These plants currently employ thousands of workers on both sides of the border.

Many border-area inhabitants establish dual residency and have family members living on both sides of the border, presenting very uncommon difficulties in terms of TB epidemiology and treatment. Approximately 75% of all TB patients diagnosed in El Paso identify contacts in Juarez. A predominance of low-income and lower middle-income residents in the area has resulted in a low tax base and relatively meager budgets for public health services in most border communities.

Consequently, in 1989 state cooperative agreement funds were used to support the first of three existing Binational Projects in El Paso/Ciudad Juarez, although the project was not actually implemented until 1991. Since that time, cooperative agreement funds have been used to establish binational border projects in Laredo/Nuevo Laredo in 1993, and in Harlingen-McAllen/Reynosa-Matamoros in April 1995. Project activities allow the development of cooperative working relationships among health professionals who manage TB control and prevention programs in areas of need on both sides of the border. Resources are being used for diagnostic services, treatment for TB patients and contacts, education and training for health professionals, the development of educational materials for the public, and outreach services. Directly observed therapy is an important functional component of these efforts.

—Reported by Eugene Tamames
Texas TB Control Program

DTBE/Rhode Island Performance Partnership

DTBE, in performance partnership with the Rhode Island TB Program, is developing a protocol for cohort analysis of reported TB patients. Since July, the Rhode Island TB Program has been following the protocol routinely in its ongoing efforts to evaluate program activities directed at ensuring that TB

patients complete an adequate course of therapy. The protocol uses two standard tools already available to TB control programs: (1) SURVS-TB, the software package for the expanded TB surveillance system, and (2) Epi Info, a software package for public health epidemiologic analysis. A third and integral tool of the protocol is NEWVAR.PGM, an Epi Info program module being developed by DTBE medical epidemiologist Alan Bloch, MD. The purpose of NEWVAR.PGM is to transform a SURVS-TB surveillance data set into an Epi Info data set that is more suitable for program evaluation. A number of programmatic variables, generated by NEWVAR.PGM, are the key features of this new data set.

The protocol consists of the following processes: (1) creation of a data set for analysis; (2) selection of cohort parameters by person, place, and time; (3) analysis of completion of adequate therapy; and (4) case conferences. Detailed written instructions for performing the first three processes are included in the protocol.

Creation of a Data Set

An Epi Info data set containing computer-generated programmatic variables is created using NEWVAR.PGM. These programmatic variables are generated from existing SURVS-TB variables.

Selection of Cohort Parameters

Characteristics of the cohort to be analyzed can be specified using SURVS-TB variables pertaining to person (e.g., race/ethnicity), place (e.g., city), and time (e.g., year counted).

Analysis of Completion of Therapy

The overall analysis of completion of adequate therapy must be conducted in the context of initial drug regimen, drug resistance, adequacy of therapy (determined by comparing initial drug regimen against drug resistance pattern), completion of therapy, and use of directly observed therapy (DOT).

Case Conferences

Case conferences are essential in completing the program evaluation process. Cases identified (through cohort analysis) as not receiving appropriate therapy should be reviewed jointly by TB control program staff and the TB medical consultant.

In Rhode Island, case conferences occur monthly. The administrator and the epidemiologist of the TB program and the medical director of the state TB clinic are regular participants. These meetings give participants the opportunity not only to review individual problem cases with regard to adequacy of treatment, but also to examine current trends in drug resistance, initial drug regimen, completion of therapy, and use of DOT in the state.

DTBE program consultants have introduced the protocol to a limited number of TB control programs in the past few months. The protocol will continue to be introduced to TB programs on an individual basis.

—Reported by Elizabeth Nacar, MPH
Rhode Island TB Control Program

USPHS Study 22, the Rifapentine Clinical Trial

The twenty-second U.S. Public Health Service TB therapy trial, also known as the Rifapentine Clinical Trial, is underway. This trial is a controlled, randomized, open-label comparison of the efficacy and safety of two treatment regimens—twice-weekly isoniazid (INH) and rifampin versus once-weekly INH and rifapentine—in the continuation phase of therapy for pulmonary TB.

- Regimen 1 consists of the standard twice-weekly therapy with high-dose INH (900 mg) and rifampin (600 mg);
- Regimen 2 consists of a new once-weekly therapy with high-dose INH (900 mg) and rifapentine, a new rifamycin with a serum half-life 5 times longer than the half-life of rifampin.

All study medications are given as directly observed therapy (DOT). The new therapy, Regimen 2, involves 30% fewer DOT visits than the current standard treatment. Thus, if the new therapy is successful, it may offer programs substantial savings in cost, administration, and personnel. The gain will be greater for those programs that practice a higher percentage of DOT.

Eligible patients are enrolled at study sites after they complete an 8-week period of standard CDC/ATS-approved induction therapy. They then receive 16 weeks of continuation phase study therapy. Finally, all patients are monitored for 2 years after completing continuation therapy.

The primary objective of this clinical trial is to compare the rates of clinical and bacteriologically confirmed relapse within 2 years after therapy between the two regimens. Additional study objectives include the comparison of rates of failure during therapy, toxicity, mortality, completion of therapy, and development of drug resistance,

Additional benefits are expected from the clinical trial. Patients enrolled in the trial will represent an unusually well-characterized group of TB patients, and numerous data banks will thus be available. A specimen bank for *M. tuberculosis* isolates and serum from patients is being established. We are discussing the execution of cost effectiveness studies at some of the study sites. Finally, a substudy concerning reasons for agreement or refusal to participate in the clinical trial is being implemented.

The Rifapentine Clinical Trial began enrollment in April 1995. As of February 22, 1996, we have enrolled 253 patients in the trial. The required sample size is 1,000 HIV-seronegative persons. Criteria for enrollment in the clinical trial are as follows:

- Age 18 or older
- Culture-positive pulmonary TB susceptible to INH and rifampin
- Documented completion of a CDC/ATS recommended induction regimen
- Documented HIV status (+ or -)

- Acceptable baseline laboratory parameters (AST < 3 X nml; bilirubin < 2.5 X nml; creatinine < 2 X nml; hemoglobin ≥ 7.0 gm/dl; platelet count of ≥ 50,000/mm^3)
- Patient's ability to care for most of own personal needs (Karnofsky score ≥ 60)
- Agreement to practice adequate birth control (if childbearing)
- Informed consent
- Absence of all of the following conditions:
  - Known treatment-limiting reactions to study drugs
  - Known contraindications to INH or rifamycins
  - Induction therapy lasting longer than 70 days just prior to enrollment
  - Pregnancy or breastfeeding
  - Extrapulmonary TB only
  - Silicotuberculosis
  - Skeletal TB
  - Any disorder requiring treatment with other drugs with antituberculous activity (e.g., rifabutin for prophylaxis against *Mycobacterium avium-intracellulare)*.

The study is being conducted at 25 clinical sites across the United States and Canada. These sites were recruited through two different open competitions (RFPs) announced in 1993 and 1994, and through a 1994 Memorandum of Agreement with the Veterans Administration. Study sites are located in Atlanta, Baltimore, Chicago, Denver, Durham, Ft. Worth, Houston, Little Rock, Los Angeles, Miami, Newark, New York City, Phoenix, San Antonio, San Diego, San Francisco, Washington, DC, and Winnipeg, Canada.

USPHS Study 22 builds upon the U.S. TB treatment experience developed in Study 21 and in the clinical trial of the twice-weekly "Denver regimen." Those interested in further information on the rationale for this trial may wish to consult the reports of those two earlier trials (Combs DL, O'Brien R, Geiter LJ. USPHS Tuberculosis Short-Course Chemotherapy Trial 21: effectiveness, toxicity, and acceptability. *Ann Int Med* 1990;112:397-406; and Cohn DL, Catlin BJ, Peterson KI, Judson FN, Sbarbaro JA. A 62-dose, 6-month therapy for pulmonary and extrapulmonary tuberculosis: a twice-weekly, directly observed, and cost-effective regimen. *Ann Int Med* 1990;112:407-415).

Many of the Study 22/Rifapentine Clinical Trial study sites are already collaborating with local health departments in an effort to enroll patients in the trial. If you have questions about the clinical trial, or are interested in learning more about enrolling patients in the trial, please call the Clinical Research Branch, Division of TB Elimination, CDC, at (404) 639-8123.

—Reported by Andrew Vernon, MD, MHS
Division of TB Elimination

Availability of TB Public Use Data Set

Data on verified TB cases reported to DTBE from 1985 through 1994 are now available for public use. These data

were extracted from the CDC TB surveillance system and include 43 separate files. The first, the Individual Case File, contains data for each verified case of TB; there is one line per case, and each line contains 12 variables including demographics (e.g., age, race, sex, etc.), history of previous TB, and clinical information (e.g., site of disease). The remaining 42 files consist of state and metropolitan statistical area (MSA) data files that provide case counts for eight variables (e.g., state, MSA, year counted, age, race and ethnic origin, sex, and site of disease). Of these 42 files, 21 contain data for each state, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands, and 21 contain data for MSAs with population of 500,000 or more. The individual case, state, and MSA files are available in ASCII or .DBF format.

To request copies of the data files and documentation, contact the Surveillance and Epidemiologic Investigations Branch, DTBE, Mailstop E-10, Centers for Disease Control and Prevention, 1600 Clifton Road, N. E., Atlanta, GA 30333, telephone (404) 639-8117. When requesting data files by mail, please indicate file(s) requested (individual, state, MSA, or all), diskette size (31/2 or 5 1/4), and format (ASCII or .DBF).

—Reported by Gloria Kelly
Division of TB Elimination

OSHA TB Control Training and Resource Guide

OSHA has developed a new *Tuberculosis Control Training and Resource Guide* to assist OSHA field compliance safety and health officers

(CSHOs) with the distribution of pertinent educational and informational materials on TB. The document contains an index of program and management resources on general management assistance, prevention and control, engineering controls, respiratory protection, and population- or site-specific assistance. In addition, currently available training programs and materials, worker education materials and resources, non-English language resources, and publications for clinicians are listed. Contact information is also provided for state and territorial health departments and other organizations and agencies.

Because the intent of the document is to assist CSHOs in the dissemination of information, OSHA has only distributed copies to its own staff. However, the document is available at no cost on the Department of Labor electronic bulletin board at (202) 219-4784. To access this document, dial into the system from a computer with modem capabilities and complete the log-on procedures as prompted. Select M (Main library of files) and enter. Select M and enter again, then select S (Select library) and enter. Type OSHA, enter, then select F (Find files) and enter. Finally, select K (Keyword search) and enter, then type any key word from the title of the document. You may then download the file to your computer for printing.

—Reported by Susan Graham, MPH
Division of TB Elimination

Notice of Change in DTBE Distribution Policy

Because of the increased costs of printing, postage, shipping, and handling, DTBE can no longer provide training and educational materials free of charge in response to all requests. DTBE will continue to provide at least one copy of new publications to state and territorial TB control officers, big city TB control officers, DTBE public health advisors, TB nursing contact persons, and members of the Advisory Council for the Elimination of Tuberculosis. However, additional copies will be available for purchase only.

Sales of DTBE training and educational materials will be done through either of the following organizations:

- The National Technical Information Service in Springfield, VA
- The Public Health Foundation in Washington, DC

As our publications and other materials are made available through these organizations, we will announce ordering information and prices. The new infection control slides, the new correctional facility slides, and the Core Curriculum slides will be the first products that will be distributed in this manner, and are available for sale as of January 1996.

—Reported by Susan Graham, MPH
Division of TB Elimination

Training Needs Assessment of TB Program Management Staff

In November, a series of focus groups was conducted on the East Coast to discuss the training needs of TB program management staff. The target groups for the needs assessment include TB controllers, program managers, public health advisors, and nurse consultants with management responsibilities. Target group members in the central and western regions were contacted in December to validate the ideas and opinions that came from the focus group discussions. We very much appreciate the input we have received on this very important topic.

In December, a DTBE Training Advisory Group met to discuss the results of the training needs assessment and options for meeting the identified needs through CDC course offerings or other modes. Course development is now underway and will include input from faculty selected by the Training Advisory Group from national, state, and local TB control staff. It is expected that a pilot training session of a new *TB Program Managers* course will be held in Atlanta in June 1996.

—Reported by Susan Graham, MPH
Division of TB Elimination

Meeting on Managed Care and TB Control Held at CDC

On June 27-28, 1995, the National Association of County and City Health Officers (NACCHO), in collaboration with the Public Health Practice Program

Office (PHPPO), CDC, assembled a 14-member work group to discuss the impact of managed care on TB control. The participants included local health officers, a representative from the National TB Controllers Association, and representatives from NACCHO, PHPPO, and DTBE. The purpose of the meeting was to identify key issues related to TB prevention and control at the local level and the potential impact of the shift toward managed care as a major method of health care delivery in the United States.

The Work Group identified five important issues involving TB control and managed care. These issues are as follows: (1) obtaining long-range sustainable funding for clinical services and maintaining the resource base of TB control programs; (2) maintaining the authority and leadership of local health departments in TB control and prevention strategies; (3) improving the pool of health care providers with expertise in treating and controlling TB; (4) providing appropriate social services to TB patients; and (5) providing care to special populations (e.g., persons who are homeless, migrant workers, foreign born, etc.). For each issue, participants summarized important concerns, sources of data, and potential solutions to identified problems. NACCHO, in collaboration with PHPPO, is planning a project using case studies to assess outcomes of TB control in states where the health department and managed care organizations have collaborated with each other.

—Reported By Zach Taylor, MD
Division of TB Elimination

A Satellite Primer on Tuberculosis

The distance-based training course, *A Satellite Primer on Tuberculosis*, was broadcast via satellite to over 575 downlink sites in 47 states (Hawaii and Alaska could not pick up the transmission and one state elected not to participate). Applications and pretests were received from 3,615 health care workers who had been selected for participation by state and local TB control programs. Of the 2,360 who completed the course by taking a posttest, 2,307 (97.8%) successfully passed.

An additional 1,261 participants audited the course. These individuals did not enroll and did not take the pretest; however, they received training modules, participated in each of the five satellite conferences, and completed an evaluation form for all the conferences. It has also been reported that additional health care workers participated in the course by making copies of the modules, or sharing the modules of other participants, and attending the satellite conferences.

The self-study modules and the live satellite broadcasts of nationally recognized TB experts were developed in response to requests from state and local TB programs. The feedback from both the participants and the TB control programs has been overwhelmingly positive regarding the quality, value, and benefits of this course. The University of Alabama at Birmingham School of Public Health is conducting an evaluation project to determine how

this course could have been more effective, why some participants did not complete the course, and how the course has benefited participants in the performance of their job duties.

Edited videotapes of the satellite broadcasts will be available for distribution to state coordinators and trainers in March 1996.

—Reported by Wanda Walton, M.Ed.
Division of TB Elimination

NEWS BRIEFS

The Food and Drug Administration (FDA) has recently approved Candin®, a delayed-type hypersensitivity (DTH) skin test antigen of *Candida albicans* manufactured by Allermed. The antigen may be used in the interpretation or confirmation of a negative tuberculin test and in the assessment of cellular immunity in persons with conditions in which anergy may be a factor. Candin® is the only *Candida albicans* antigen approved by the FDA for cellular hypersensitivity skin testing. Formal instructions are provided on the administration of Candin® and the interpretation of the result. It is available in a 1.0 mL multidose vial, and the cost is $28 per vial. It will be delivered by second-day delivery; the UPS charge is $6 up to 1 lb. For more information or to order, call or write
Allermed Laboratories, Inc.
7203 Convoy Court
San Diego, CA 92111
Tel. (800) 221-2748
Fax (619) 292-5934

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NCET has published the first issue of its quarterly newsletter, *NCET News*. If you would like to receive it, call NCET Administrator Jocelyn Jackson at (212) 315-8718.

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"The People's Plague: Tuberculosis in America," an excellent 2-hour program that was broadcast on PBS in October 1995, is available on videotape (the broadcast was announced in Spring/Summer 1995 *TB Notes*, News Briefs). The documentary shows how TB has affected every aspect of today's health care debate, from delivery of service to cost containment, from disease prevention to social control. Told through the personal stories of dozens of TB survivors, and from the point of view of health care workers, researchers, and TB victims of today, *Part I: The Captain of All These Men of Death* chronicles the history of TB and its cure in the early part of the century. *Part II: The Gospel of Health* presents the facts about the disease that survived its own death to confront us again at the close of the century. The cost of the 2-hour program is $190 ($95 for each 1-hour part). For more information or to order, call or write
Direct Cinema Limited
Attn: David Heldman
P.O. Box 10003
Santa Monica, CA 90410
Tel. (800) 525-0000 (8 am-6 pm PST)
Fax (310) 396-3233 (24 hours)

BEHAVIORAL SCIENCE NOTES

Methods for Evaluating Completion of Adequate Therapy in TB Clinics

State and local health departments have expressed a need for better evaluation methods related to TB control program activities (see "DTBE Surveys Evaluation Activities of TB Control Programs," by Nilka Ríos, Fall 1994 *TB Notes*, pages 6-8). As part of its response to this need, DTBE recently began a new project to develop and field test a set of methods designed to increase the evaluation capacity of TB programs. These methods, which are described in a manual drafted by DTBE, focus on various factors related to successful completion of adequate therapy for TB patients. The manual was written primarily for use by state and local TB program evaluators. The field test project is being done in collaboration with seven state TB control programs including Arizona, Florida, Mississippi, Missouri, New Jersey, New York, and Virginia. As a way to learn if the methods are generalizable, the field test will be implemented in diverse locations throughout the states. After the field test, each state will provide DTBE with recommendations for revising and improving the evaluation methods manual.

The evaluation methods manual includes a combination of techniques used in epidemiology and in the behavioral sciences. Using different methods provides complementary perspectives on the completion of adequate therapy. The first part of the manual describes steps for conducting a cohort analysis of TB patients who are under the jurisdiction of a TB control program. Using data from TB surveillance activities, the cohort analysis techniques yield quantitative profiles of TB patient characteristics, treatment regimens, drug susceptibility testing, use of directly observed therapy (DOT), and therapy completion outcomes for a group of individuals defined according to specific person, place, and time criteria. Alan Bloch (DTBE), Joe Scavotto (DTBE), and Elizabeth Nacar (Rhode Island Department of Health) created a series of Epi Info software programs for automating the cohort analysis steps (see “DTBE/Rhode Island Performance Partnership” by Elizabeth Nacar in this issue of *TB Notes,* pages 20-21). The Epi Info programs use data contained in each state's existing SURVS-TB patient data base. Results from the cohort analysis help identify possible problems that may be affecting completion of adequate therapy in a TB program. For example, some subgroups of patients may have higher therapy completion rates compared with other subgroups. Other examples might be an apparent mismatch between initial drug regimens and drug susceptibility testing results, or insufficient use of DOT to ensure therapy completion among patient groups at high risk of nonadherence (e.g., homeless patients). The cohort analysis procedures allow TB program staff to assess whether appropriate regimens are being used and to generate a line list of patients who have not completed therapy within a specified

period (e.g., 6 or 12 months). Chart reviews may be appropriate for patients who have not completed their treatment regimen within the desired length of time.

Following the description of cohort analysis techniques, the next sections of the manual include suggestions for conducting an evaluation of program operations. This entails collection of data on adequacy of clinic resources. In addition, procedures are described for conducting focus group meetings and individual interviews with TB clinic staff. The purpose of the group and individual interviews is to learn staff insights and explanations for the therapy completion problems identified during the cohort analysis. The meetings and interviews are an important way to learn the staff's ideas for improving completion of adequate therapy.

The final methods involve sampling and interviewing individual TB patients. Patient interviews might include open-ended questions or closed-ended structured questions (see "Methods for Analyzing Responses to Open-ended Survey Questions," by James Carey, Summer 1994 *TB Notes*, pages 13-14). Patient interview data allow the evaluator to learn about barriers to therapy completion from the customer's perspective. For example, patients may have difficulty in accessing the TB clinic services due to transportation difficulties or inconvenient hours of operation. Cultural and social differences may sometimes lead to nonadherence, especially in foreign-born patients. Some patients might resist taking their medications because of misunderstandings created by language barriers (see "Working with an Interpreter," by Lori Laliberte-Carey and Yung Krall, Winter 1995 *TB Notes*, pages 17-19). Assessing patient perspectives provides an opportunity for evaluators to identify TB patient education deficits and to develop ways to orient clinic services to better fit patient needs.

Each of the seven states is developing a protocol to adapt these methods for addressing local evaluation needs. The field test is scheduled for completion by the summer of 1996. Persons interested in learning more about the evaluation methods or the field test project may call Zach Taylor at (404) 639-8123 or send an e-mail message (zxt0@cpstb1.em.cdc.gov) for more information.

—Reported by James W. Carey, PhD, MPH
Division of TB Elimination

New Behavioral Science Publication

A new document entitled *Improving Tuberculosis Treatment and Control: An Agenda for Behavioral, Social, and Health Services Research* has been published by DTBE. This 144-page document summarizes the discussions and conclusions from a 3-day workshop held during August 1994 in Bethesda, MD. The purpose of the workshop was to help develop an agenda for research on the primary behavioral, social, and health service aspects of tuberculosis treatment, prevention, and control. The publication includes sections identifying

opportunities for future research and intervention projects, suggestions for specific research questions, and copies of individually authored papers presented at the meeting.

Copies of this document may be obtained free of charge by contacting Dianne Meeks in DTBE. Requests can be made by Internet E-mail, dim1@cpstb1.em.cdc.gov, or by phone, (404) 639-8135. For more general information about the meeting or the publication, contact Esther Sumartojo (ems2@cpstb1.em.cdc.gov).

—Reported by James W. Carey, PhD, MPH
Division of TB Elimination

INTERNATIONAL NOTES

Change in Processing of Applicants for Migration from Vietnam

The recent change in political relations between the United States and the Socialist Republic of Vietnam (Vietnam) will result in standardization of the immigration process of persons migrating from Vietnam to the United States. This will result in a change in a number of aspects of the medical screening of applicants for migration, including aspects of TB screening and treatment. Because Vietnamese persons account for the third largest number of TB cases among immigrants to the United States, these changes will have important implications for TB controllers in communities where Vietnamese immigrants settle.

In March 1995, four individuals from CDC were detailed to Ho Chi Minh City, Vietnam, to assess the impact of the change in processing applicants, to develop methods for maintaining the high quality of the screening process which has been in place in Vietnam over the past several years, and to assist with implementing the transition from refugee to immigrant processing. This assistance included providing training and instituting an automated data management and tracking system for applicants undergoing medical screening and evaluation. Members of the group were Bess Miller, MD, MSc, and Frank Seawright, DTBE; Peg Tipple, MD, Division of Quarantine (DQ); and Gary Conrad, Division of HIV/AIDS. Edward Yacavone, Regional Coordinator, DQ, CDC/Bangkok, also participated in the review and implementation of the transition phase. In addition, Richard Moyer, DQ, traveled to Hanoi in September 1995, to assess the ways in which the opening of a U.S. embassy in Hanoi might affect the processing of persons migrating to the United States from Vietnam.

The following is a summary of the key changes to the processing system which have occurred (refer to the Spring 1994 *TB Notes* article, “A Review of the TB Screening Program in Vietnam,” for a summary of the system which was in place):
(1) As of October 1, 1994, the U.S. Consular Office in Bangkok no longer accepts applications from individuals in Vietnam seeking refugee status. Refugee applications received prior to this date will continue to be processed over the next 1 to 2 years. All new

applicants will be processed through the immigrant visa application process.

(2) The medical examination for visa applicants will take place at Cho Ray Hospital, Ho Chi Minh City. Panel physicians at Cho Ray Hospital received an intensive training program on TB, including the interpretation of chest radiographs, between January and July 1995.

(3) Medical screening in Hanoi will begin later in 1996 and will initially be limited to orphans. Since very few Vietnamese immigrant visa applicants currently reside in northern Vietnam, most of the medical processing will continue to be done in Ho Chi Minh City.

(4) Class “A” TB applicants (AFB smear-positive) will only be required to convert sputum smear to negative before becoming eligible for a waiver to travel. Fortunately, most Class “A” TB applicants are continuing to receive a complete course of supervised therapy administered at Cho Ray Hospital in Vietnam.

(5) Class “B1" applicants (persons with smear-negative active TB) will not be required to receive treatment prior to travel. Currently, some of these applicants are receiving supervised treatment at Cho Ray Hospital. However, in contrast to the previous arrangement, many Class “B1" applicants are traveling to the United States prior to completing a full course of treatment.

6) Children under 15 years of age will no longer routinely receive a chest radiograph.

(7) Preventive therapy will no longer be provided to immediate family members of Class “A” immigrants.

(8) Predeparture sputum exams and chest radiographs will no longer be performed.

(9) The International Organization for Migration (IOM) will no longer be providing oversight to the screening process or the treatment of TB.

These changes are a result of the difference in the processing of refugees and immigrants overseas. As a result, however, some of the curative and preventive treatment of applicants which has been taking place in Vietnam will no longer be occurring or will not be completed. Predeparture “checks” will no longer occur. In addition, immigrants with Class “B1" TB and Class “B2" TB or latent infection will no longer be identified through refugee programs in the United States. Thus, it is critical for health department TB control programs to actively seek out these individuals who have, or are at very high risk of developing, active TB. Particular emphasis should be placed on locating all Class “A” and “B” immigrants and ensuring completion of treatment.

A number of communities have developed innovative strategies for locating Class “B” immigrants by working with local Immigration and

Naturalization Service officials and community based organizations. Some of these strategies will be presented at a symposium on TB in foreign-born persons which will take place at the Annual ATS International Meeting in New Orleans, May 1996.

An electronic tracking system is currently being pilot tested. This system will improve the quality and timeliness of notification to health departments of the arrival of immigrants with Class "A" and Class "B" TB from Vietnam The system uses simple Epi Info programs and utilities to capture data and produce reports.

—Reported by Bess Miller, MD, MSc
Division of TB Elimination
Richard Moyer
Division of Quarantine

NEW PUBLICATIONS

CDC. *Controlling TB in Correctional Facilities.* Atlanta, GA: Centers for Disease Control and Prevention;1995.

CDC. *Forging Partnerships to Eliminate Tuberculosis.* Atlanta, GA: Centers for Disease Control and Prevention;1995.

CDC. Videotape of *A Satellite Primer on Tuberculosis*. Atlanta, GA: Centers for Disease Control and Prevention;1995.

CDC. Tuberculosis among foreign-born persons who had recently arrived in the United States--Hawaii, 1992-1993, and Los Angeles County, 1993. *MMWR* 1995;44:703-707.

CDC. *Improving Tuberculosis Treatment and Control: An Agenda for Behavioral, Social, and Health Services Research.* Proceedings of "Tuberculosis and Behavior: National Workshop on Research for the 21st Century," Aug. 28-30, 1994, Bethesda, MD. Atlanta, GA: Centers for Disease Control and Prevention;1995.

Braden CR and an Investigative Team. Infectiousness of a university student with laryngeal and cavitary tuberculosis. *Clin Infect Dis* 1995;21:565-70.

Khan EA and Starke JR. Diagnosis of tuberculosis in children: increased need for better methods (synopsis). *Emerging Infectious Diseases* 1995;1(4):115-123.

TRAINING AND EDUCATIONAL MATERIALS

A slide set has been developed to accompany *Guidelines for Preventing the Transmission of Mycobacterium tuberculosis in Health-Care Facilities, 1994*. These slides are designed to be used by the staff of health departments and health care facilities and others to facilitate the training of persons involved in developing, implementing, or evaluating tuberculosis infection control programs in health-care facilities. A limited number of these slides were provided to state, territorial, and big city TB control officers. We have arranged for additional sets to be available for purchase through the National Technical Information Service (NTIS). The price is $50 per set. To order a set, contact NTIS and ask for

#AVA19824SOO (to clarify, those are letter O's, not zeros):
NTIS
5285 Port Royal Road
Springfield, VA 22161
Tel. (703) 487-4650
Fax (703) 321-8547

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AIDS-SidAlerte International is part of an international network of nongovernmental organizations in 13 African countries and in France. This network focuses on AIDS prevention and training in Africa and publishes a quarterly magazine, *TB & HIV*, in French and in English, and the monthly *SIDALERTE* in French. It was one of the first groups to call attention to the relationship between TB and HIV. The staff of this organization are actively in touch with key TB experts around the world, and generally attend major TB-related conferences.

TB & HIV was launched in the fall of 1993 and is targeted at clinicians, doctors, nurses, researchers, community based organizations, international donor organizations, local and federal health agencies, and public health and hospital administrators. It covers global issues related to HIV/AIDS and TB and to the interaction between the two in terms of epidemiology, research, prevention, care, and country-specific news. Annual subscriptions for individuals are $55, and for institutions $200. To order or obtain more information, contact Mr. Andrew Broderick at the following:
AIDS SidAlerte International
950 Cabrillo Street, #14
San Francisco, California 94118
Tel./Fax (415) 750-1624
E-mail: aidsida@igc.apc.org

PERSONNEL NOTES

Angela Bauer, Public Health Advisor assigned to the New York City TB Program since January 1993, has accepted a position with the National Immunization Program on a lateral transfer to the City of New Orleans Health Department. She transferred to New Orleans on January 21, 1996.

Gail Burns is leaving the CDC TB program. She has accepted a position with the Violence Prevention Program of the National Center for Injury Prevention and Control. Gail has been on assignment to the New York City TB program since January 1993. She will transfer to Atlanta on March 3, 1996.

James Carey, PhD, MPH, has left DTBE to accept a position with the Division of HIV/AIDS Prevention, Behavioral Intervention Research Branch, NCHSTP, CDC. A research anthropologist in the Prevention Effectiveness Unit, CRB, Jim has been involved in studies of the behaviors and beliefs of TB-infected immigrants as well as other projects concerned with improving adherence and program evaluation. His departure was effective February 16, 1996.

Renee Carter has been selected for the position of branch secretary in the Clinical Research Branch, DTBE. Renee comes to DTBE from an outside federal agency. She joined CRB on January 22.

Dennis Christianson has been selected as a Program Consultant in the Program Operations Section, DTBE. Since August 1992, Dennis has been DTBE's senior Public Health Advisor assigned to the New York State Department of Health in Albany. He has had the lead responsibility for developing and managing an expanded field operations component of the Statewide tuberculosis program. From 1989 to August 1992, he was assigned to the Louisiana Department of Health and Hospitals and was manager of the tuberculosis program in the City of New Orleans. He will transfer from Albany to Atlanta on March 3, 1996.

James Enns has resigned from his TB assignment in New York City effective February 12, 1996.

Susan Graham, MPH, officially joined the Program Support Section of DTBE in May 1995. Susan, a Health Education Specialist, worked in DTBE from September through November 1990 as an Association of Schools of Public Health intern and from March 1994 through April 1995 as a Visiting Fellow. She was also selected for a special assignment in Côte d'Ivoire, Africa, for several weeks during January and February 1995, in which she conducted public health training in the dracunculiasis (guinea worm) eradication program. Susan has been responsible for the publication of most of DTBE's recent training and education documents.

Eric Hall resigned from his TB assignment in New York city effective December 31, 1995.

Sherry Hussein left DTBE in September 1995. She had recently been selected as the branch secretary in DTBE's Clinical Research Branch. Sherry has transferred to the Travel Office in the National Center for HIV, STD, and TB Prevention.

John Johnson resigned from his TB assignment in Birmingham, Alabama, effective January 2, 1996.

Lauren Lambert has been selected for the new Public Health Analyst position in CSSA, DTBE. Lauren joined the DTBE field staff in February 1993 as a Public Health Associate assigned to the New York City TB Program. She officially joined Dr. Jose Becerra's staff on December 24, 1995.

Judi Mayerhofer was selected for a Public Health Advisor position in New Rochelle, New York. Judi came to work for CDC in February 1993 as a TB Public Health Associate in New York City. She reported for duty on January 21, 1996.

Kelly Martin, who served as an administrative clerk in the Office of the Director, DTBE, since August 1992, resigned from CDC effective September 30, 1995.

Lisa McMillan has left CDC to take a position with the Rockdale County, Georgia, Board of Education. Lisa, who worked as a Staff Specialist in the Office of the Director, came to DTBE in 1989. Her resignation was effective February 8, 1996.

Stuart McMullan has been selected for the public health advisor position in the California TB control program. He had been assigned to the Los Angeles TB control program since June 1993. He will report for duty in Berkeley on March 17, 1996.

Lynn Mercer, a Program Analyst in DTBE, is leaving CDC in March 1996 to join the Office of the Secretary, DHHS, in Washington, DC. She is assuming the duties of Budget Analyst in the Systems, Staffing, and Congressional Liaison Branch. Lynn came to work for CDC in the Procurement and Grants Office in August 1991, and began working for DTBE in October 1992.

Bess Miller, MD, MSc, has been selected as the Associate Director for Science for DTBE. Bess came to CDC in 1981 as an EIS officer working on early AIDS investigations. She has been with DTBE since 1985, initially working in the Program Services Branch where she served as deputy chief for a number of years. More recently she has served as chief of the Prevention Effectiveness Studies Unit in the Clinical Research Branch. She has also served as consultant to the Dekalb County Tuberculosis Clinic, where she has provided care for TB patients since 1989.

Paul Moffat, Public Health Advisor assigned to the City of New Orleans TB Program since October 1993, accepted a position with the National Immunization Program on a lateral transfer to the Ohio Department of

Health. He transferred to Columbus on September 17, 1995.

Joseph (Pat) O'Brien, a Public Health Associate assigned to the New York City TB Program since February 1993, left CDC employment on October 27, 1995.

Richard J. (Rick) O'Brien, MD, has been selected as the chief of the Clinical Research Branch (CRB) in DTBE. Rick is returning to a position that he held previously. He served as the chief of CRB until 1991, when he left DTBE for a 5-year detail to the WHO Global Tuberculosis Programme; during this time he was responsible for applied research. Larry Geiter replaced Rick as chief of CRB from 1991 until 1995, when he left DTBE to join the International Union Against Tuberculosis and Lung Disease in Washington, DC. Rick will return to his former position effective July 1, 1996.

Walter Q. Page, Public Health Advisor, Office of the Director, DTBE, has been selected as the Executive Director of the National Tuberculosis Controller's Association. Walt had worked for more than 30 years as a public health advisor in several state TB programs, the Indian Health Service, the Program Services Branch of DTBE, and most recently the Office of the Director. Walt has filled many senior roles in the division; among these, he played a key role in writing and updating the *National Action Plan to Combat Multidrug-Resistant Tuberculosis*. He has also been arranging the National TB Controllers Workshop (now to be held in September). We will miss Walt's participation as a senior manager in the division, but are pleased that he will still be a colleague in the fight against tuberculosis. His last day with DTBE is March 1, 1996.

Gabriel Palumbo was selected for a Public Health Advisor position in Hauppauge (Long Island), New York. Gabe joined CDC as a TB Public Health Associate in February 1993 in New York City. He reported for duty in Hauppauge on January 21, 1996.

Frank Seawright has left DTBE to accept a position as Chief of Data Management in the Division of Quarantine (DQ), NCHSTP. Frank, who came to DTBE in 1984, has been honored and recognized many times during his employment here for his valuable contributions to the Division. He was the Senior Public Health Advisor for TB in Baltimore and Philadelphia; most recently he served as a computer programmer and application developer with CSSA. His move to DQ was effective December 23, 1995.

Devri Smith has been selected for a Public Health Advisor position in Los Angeles. Devri came to work for CDC in February 1993 as a Public Health Associate in New York City. Most of her work there has been done on Staten Island. She transferred to Los Angeles on January 21, 1996.

Craig Studer has left DTBE to accept a multi-program PHA position in South Dakota. He has been hired as the CDC

Public Health Advisor for Immunization, HIV, STD, and TB in that state. Craig has held senior management roles in the TB programs in Washington State, New York City, and Michigan. He has also made major contributions here at DTBE in Atlanta as a program consultant and, most recently, as manager of the TIMS software development project. Craig's new assignment was effective November 27, 1995.

Barbara Styrt, MD, has joined DTBE as an epidemiologist in the Clinical Research Branch. She came to CDC from the Food and Drug Administration in Rockville where she was a Staff Fellow in the USPHS Epidemiology Training Program, then a Medical Officer/Epidemiologist in the Center for Drug Evaluation and Research. Prior to that she served on the staff of the Michigan State University Department of Medicine for a number of years. Barbara joined DTBE on February 20, 1996.

Autumn Tolliver resigned from her TB assignment in New York City effective November 30, 1995.

In Memoriam

Miriam Glickson - Ms. Miriam Glickson of the Division of TB Elimination passed away on December 23, 1995. Ms. Glickson retired from CDC one year ago in December 1994. She came to work for CDC in 1975 as a clerk in the Computer and Statistical Services Activity, DTBE, where she provided valuable contributions entering and maintaining TB data for the Division.

Shirley Ferebee Woolpert - Some of our readers may not have been aware of the death of Shirley F. Woolpert on April 25, 1995, in Bethesda, Maryland. Mrs. Woolpert was an internationally known TB researcher and important contributor to the work of the International Union Against TB and Lung Disease (IUATLD). In 1945 she began working for Dr. Carroll E. Palmer, an epidemiologist who was chief of the Field Research Branch of the newly formed Division of TB Control in the U.S. Public Health Service. In 1947 she organized and directed the first collaborative controlled trial of TB therapy in the United States, after streptomycin was recognized as an extremely useful treatment for TB. To do this, she assembled from throughout the country a group of 14 TB sanatoria medical directors, who agreed to follow a strict protocol. During the next 25 years, Mrs. Woolpert maintained and utilized this collaborative group to conduct a total of 20 trials which are models of collaborative field studies. In 1955, at the suggestion of New York City pediatrician Edith Lincoln, she organized another group which would eventually include some 60 health departments and mental institutions. This group showed the effectiveness of isoniazid preventive therapy among persons believed to be at high risk for the development of TB. These included infants and young children recently infected with *M. tuberculosis*, household contacts of TB patients, patients in mental hospitals, Alaskan villagers, and persons with evidence of healed, untreated TB. As a member of the Committee on Prophylaxis of IUATLD, she played a key role in developing a protocol and directing the conduct of a trial of different durations of isoniazid prophylaxis in preventing the reactivation of latent pulmonary TB.

Mrs. Woolpert received the Superior Service Award in 1956 and the Distinguished Service Award in 1963 from what was then the U.S. Department of Health, Education, and Welfare. In 1972 she was awarded the Trudeau Medal by the National Tuberculosis and Respiratory Disease Association (now the American Lung Association), following Dr. Palmer to become only the second epidemiologist to be so honored.

The note regarding Mrs. Woolpert was excerpted from an obituary, by George W. Comstock and Bernice E. Doster, that appeared in the December 1995 issue of the IUATLD newsletter.

CALENDAR OF EVENTS

February 8-10, 1996
Rapid Diagnostic Tests for Tuberculosis. What Is the Appropriate Use?
San Diego, California
American Thoracic Society
Tel. (619) 299-6673
Fax (619) 299-6675

March 1-2, 1996
Annual Meeting, North American Region of the International Union Against Tuberculosis and Lung Disease (IUATLD)
Chicago, Illinois
Theme: "Tuberculosis and Migration"
For agenda/registration:
Tel. (312) 243-2000
Fax (312) 243-3954
For questions, contact Dr. P.R.J. Gangadharam
Tel. (312) 413-3099
Fax (312) 243-3954

March 18-20, 1996
Tuberculosis Program Manager's Course
Maple Shade, New Jersey
Debra Bottinick
NJ Medical School National TB Center
(201) 982-3270

April 19, 1996
Preventing Tuberculosis in the Workplace
Newark, New Jersey
Debra Bottinick
NJ Medical School National TB Center
(201) 982-3270

May 10-15, 1996
1996 American Lung Association/American Thoracic Society International Conference
New Orleans, Louisiana
American Lung Association
Tel. (212) 315-8700
Fax (212) 315-6498

June 3, 1996
Tuberculosis Case Management for Nurses
Newark, New Jersey
Debra Bottinick
NJ Medical School National TB Center
(201) 982-3270

June 18-20, 1996
Tuberculosis Intensive
San Francisco, California
A 3-day course for medical providers covering diagnosis, management, and treatment of TB; laboratory testing; infection control; and community control.
Training Coordinator
Francis J. Curry National TB Center
(415) 502-4600

June 26, 1996
Tuberculosis Update
Bakersfield, California
A clinical course focusing on TB epidemiology, diagnosis, management, and treatment.
Training Coordinator
Francis J. Curry National TB Center
(415) 502-4600